



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0017; Product Identifier 2018-NM-112-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus SAS Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2007-11-11 and AD 2017-01-11, which apply to all Airbus SAS Model A318 and Model A319 series airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; and Model A321 series airplanes. AD 2007-11-11 requires an inspection to determine the serial number of both main landing gear (MLG) sliding tubes, repetitive inspections for cracking of the affected MLG sliding tubes and corrective actions if necessary, and eventual replacement of both MLG shock absorbers. AD 2017-01-11 requires identification of the part number and serial number of the MLG sliding tubes; inspection of affected chromium plates and sliding tube axles for damage; and replacement of the sliding tube if necessary. Since we issued AD 2007-11-11 and AD 2017-01-11, it was determined that cracks were found in the MLG sliding tubes due to certain manufacturing defects that might not be identified using the current on-wing scheduled inspections. This proposed AD would retain certain requirements of AD 2007-11-11 and AD 2017-01-11. This proposed AD would also

require repetitive inspections of affected MLG sliding tubes for cracking, replacement of cracked MLG sliding tubes, and eventual replacement of each affected MLG sliding tube.

We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus SAS, Airworthiness Office – ELIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0017; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3223.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0017; Product Identifier 2018-NM-112-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will

also post a report summarizing each substantive verbal contact we receive about this proposed AD.

## **Discussion**

We issued AD 2007-11-11, Amendment 39-15068 (72 FR 29241, May 25, 2007) (“AD 2007-11-11”), for all Model A318 and Model A319 series airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; and Model A321 series airplanes. AD 2007-11-11 requires a one-time inspection to determine the serial number of both MLG sliding tubes, repetitive detailed inspections for cracking of the affected MLG sliding tubes and corrective actions if necessary, and eventual replacement of both MLG shock absorbers, which terminates the repetitive inspection requirements. AD 2007-11-11 resulted from a determination that inspections and mandatory replacement of the MLG shock absorbers are necessary. We issued AD 2007-11-11 to address cracking in an MLG sliding tube, which could result in failure of the sliding tube, loss of one axle, and consequent reduced controllability of the airplane.

We also issued AD 2017-01-11, Amendment 39-18778 (82 FR 5362, January 18, 2017) (“AD 2017-01-11”), for all Model A318 and Model A319 series airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; and Model A321 series airplanes. AD 2017-01-11 requires identification of the part number and serial number of the MLG sliding tubes; inspection of affected chromium plates and sliding tube axles for damage; and replacement of the sliding tube if necessary. AD 2017-01-11 resulted from a report of a rupture of an MLG sliding tube axle. We issued AD 2017-01-11 to address cracks in

the axle and (partial) detachment of the axle and wheel from the sliding tube, which could result in failure of an MLG.

#### **Actions Since AD 2007-11-11 and AD 2017-01-11 Were Issued**

Since AD 2007-11-11 and AD 2017-01-11 were issued, during MLG overhaul, cracks were found in the lower slave link bracket lug holes on two MLG sliding tubes. Subsequent investigations determined that these cracks may have developed due to burrs, which could have been present since manufacture, and it was determined that cracks in the affected sliding tubes may not be found during the existing on-wing scheduled inspections.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0135, dated June 26, 2018 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus SAS Model A318 and A319 series airplanes; Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

The MCAI states:

Cracks were reported on [main landing gear] MLG sliding tubes and the investigations determined metallic inclusion during production and abnormal grinding operation during overhaul as cause of these cracks. Prompted by these reports, respectively, [Direction Generale de l’Aviation Civile] DGAC France issued [French] AD F-2005-115 (EASA approval 2005-6032) [which corresponds to FAA AD 2007-11-11] and EASA issued AD 2014-0058 [which corresponds to FAA AD 2017-01-11], both requiring inspections and replacement of certain MLG sliding tubes.

More recently, during overhaul, cracks were found in the lower slave link bracket lug holes on two MLG sliding tubes. Subsequent investigations determined that these cracks may have developed due to burrs, which could have been present since manufacture. Based on the fact that the sliding tube is certified as a safe life part, this is considered to be a non-compliance with the requirements of [Joint Aviation Requirements] JAR 25.571(c). Cracks in the affected sliding tubes may not be found during the existing on-wing scheduled inspections.

This condition, if not detected and corrected, could lead to sliding tube failure, possibly resulting in MLG collapse, damage to the aeroplane and injury to occupants.

Prompted by these findings, Safran Landing Systems, the MLG manufacturer (formerly Messier-Dowty, Messier-Bugatti-Dowty, and hereafter referred to as “Safran” in this AD), introduced additional quality steps to eliminate burrs in the manufacturing process. To address this potential unsafe condition on delivered MLG sliding tubes, Airbus issued SB [service bulletin] A320-32-1441, providing instructions for on-wing repetitive inspections, and Safran issued SB 200-32-321 and SB 201-32-68, as applicable to MLG configuration, providing instructions for inspection in shop.

For the reason described above, this [EASA] AD partially retains the requirements of DGAC France AD F-2005-115 (EASA approval 2005-6032) and EASA AD 2014-0058, which are superseded, requires repetitive inspections of the affected MLG sliding tubes [for cracking] and, depending on findings, accomplishment of applicable corrective action(s) [replacement of a cracked MLG sliding tube with a serviceable MLG sliding tube]. This [EASA] AD also defines criteria for installation on an aeroplane of an affected MLG sliding tube.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0017.

### **Explanation of Change to Restated Text in Paragraph (g) of this Proposed AD**

Paragraph (g) of this proposed AD is a restatement of paragraph (i) of AD 2007-11-11. We have revised the restated text to remove the reference to Airbus A318/A319/A320/A321 Aircraft Maintenance Manual Chapter 32-11-13, page block 401. Instead, we have added Note 1 to paragraph (g) of this proposed AD to specify that guidance on the replacement specified in paragraph (g) of this proposed AD can be found in Airbus A318/A319/A320/A321 Aircraft Maintenance Manual Chapter 32-11-13, page block 401.

### **Model A320-216 Airplanes**

The Airbus SAS Model A320-216 was U.S. type certificated on December 19, 2016. Before that date, any EASA ADs that affected Model A320-216 airplanes were included on the Required Airworthiness Actions List (RAAL). One or more Model A320-216 airplanes have subsequently been placed on the U.S. Register, and will now be included in FAA AD actions. For Model A320-216 airplanes, the requirements that correspond to AD 2007-11-11 and AD 2017-01-11 were mandated by the MCAI via the RAAL. Although that RAAL requirement is still in effect, for continuity and clarity we have identified Model A320-216 airplanes in paragraph (c) of this AD; the restated requirements of paragraphs (g) through (m) in this proposed AD would therefore apply to those airplanes.

## **Related Service Information under 1 CFR part 51**

Airbus has issued the following service information.

- Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017. The service information describes procedures for inspections of the MLG sliding tubes for cracking and corrective actions (which includes replacing the MLG sliding tubes).

- Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005. The service information specifies the serial numbers of the MLG sliding tubes that must be replaced.

Safran has issued the following service information. These documents are distinct since they apply to different airplane models.

- Service Bulletin 200-32-321, Revision 2, dated October 3, 2017; and Service Bulletin 201-32-68, Revision 2, dated October 3, 2017. These documents specify the part numbers and serial numbers of the affected MLG sliding tubes. These documents are distinct since they apply to different airplane models.

- Service Bulletin 200-32-286, Revision 3, dated October 3, 2008; and Service Bulletin 201-32-43, Revision 3, dated October 3, 2008. These documents specify the part numbers and serial numbers of the affected MLG shock absorbers. These documents are distinct since they apply to different airplane models.

This proposed AD would also require Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014, which the Director of the Federal Register approved for incorporation by reference as of February 22, 2017 (82 FR 5362, January 18, 2017).



The service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA's Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

#### **Proposed Requirements of this NPRM**

This proposed AD would retain certain requirements of AD 2007-11-11 and AD 2017-01-11. This proposed AD would also require repetitive inspections of affected MLG sliding tubes for cracking, replacing cracked MLG sliding tubes with serviceable MLG sliding tubes, and eventual replacement of each affected MLG sliding tube with a MLG sliding tube that is not affected, which is terminating action for the repetitive inspections.

#### **Costs of Compliance**

We estimate that this proposed AD affects 1,186 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

### Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2007-11-11 (297 airplanes) [*]	8 work-hours X \$85 per hour = \$680	Up to \$45,310	Up to \$45,990	Up to \$13,659,030 <sup>[*]</sup>
Retained actions from AD 2017-01-11	18 work-hours X \$85 per hour = \$1,530	\$0	\$1,530	\$1,814,580
New proposed actions	13 work-hours X \$85 per hour = \$1,105	\$0 <sup>[**]</sup>	\$1,105	\$1,310,530

\* Operators should note that, although all U.S.-registered airplanes are subject to the requirements of AD 2007-11-11, there are only 297 possible affected MLG sliding tubes in the worldwide fleet. We have no way of knowing how many affected MLG sliding tubes, if any, are installed in U.S.-registered airplanes.

\*\* We have received no definitive data for the parts costs for the replacements.

We estimate the following costs to do any necessary on-condition action that would be required based on the results of any required actions. We have no way of determining the number of aircraft that might need this on-condition action:

### Estimated costs of on-condition action

Labor cost	Parts cost	Cost per product
6 work-hours X \$85 per hour = \$510	\$0 <sup>[*]</sup>	\$510

\* We have received no definitive data for the parts costs for the on-condition actions.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
3. Will not affect intrastate aviation in Alaska, and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive (AD) 2007-11-11, Amendment 39-15068 (72 FR 29241, May 25, 2007); and AD 2017-01-11, Amendment 39-18778 (82 FR 5362, January 18, 2017); and

- b. Adding the following new AD:

**Airbus SAS:** Docket No. FAA-2019-0017; Product Identifier 2018-NM-112-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces the following ADs.

(1) AD 2007-11-11, Amendment 39-15068 (72 FR 29241, May 25, 2007) (“AD 2007-11-11”).

(2) AD 2017-01-11, Amendment 39-18778 (82 FR 5362, January 18, 2017) (“AD 2017-01-11”).

**(c) Applicability**

This AD applies to the Airbus SAS airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, all manufacturer serial numbers.

(1) Model A318-111, -112, -121, and -122 airplanes.

(2) Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes.

(4) Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by a determination that cracks were found in the main landing gear (MLG) sliding tubes due to certain manufacturing defects that might not be identified using the current on-wing scheduled inspections. We are issuing this AD to

address cracking in an MLG sliding tube, which could lead to failure of an MLG sliding tube resulting in MLG collapse, damage to the airplane, and injury to passengers.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Replacement of AD 2007-11-11, with Updated References to Service Information and Specific Delegation Approval Language**

This paragraph restates the requirements of paragraph (i) of AD 2007-11-11, with updated references to service information and specific delegation approval language.

Within 41 months after June 29, 2007 (the effective date of AD 2007-11-11), replace all MLG shock absorbers equipped with sliding tubes having serial numbers listed in Airbus All Operators Telex (AOT) A320-32A1273, Revision 01, dated May 6, 2004; or the Accomplishment Instructions of Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005; with new or serviceable MLG shock absorbers equipped with sliding tubes having serial numbers not listed in Airbus AOT A320-32A1273, Revision 01, dated May 6, 2004; or the Accomplishment Instructions of Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005; using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature. As of June 29, 2007, only Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005, may be used to determine the affected sliding tubes.

Note 1 to paragraph (g) of this AD: Guidance on the replacement specified in paragraph (g) of this AD can be found in Airbus A318/A319/A320/A321 Aircraft Maintenance Manual Chapter 32-11-13, page block 401.

**(h) Retained MLG Sliding Tube Part Number and Serial Number Identification of AD 2017-01-11, with No Changes**

This paragraph restates the requirements of paragraph (g) of AD 2017-01-11, with no changes. Within three months after February 22, 2017 (the effective date of AD 2017-01-11): Do an inspection to identify the part number and serial number of the MLG sliding tubes installed on the airplane. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the MLG sliding tubes can be conclusively determined from that review.

**(i) Retained Identification of Airplanes of AD 2017-01-11, with No Changes**

This paragraph restates the identification specified in paragraph (h) of AD 2017-01-11, with no changes. An airplane with a manufacturer serial number (MSN) not listed in figure 1 to paragraph (i) of this AD is not affected by the requirements of paragraph (j) of this AD, provided it can be determined that no MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD has been installed on that airplane since first flight of the airplane.

**Figure 1 to Paragraph (i) of this AD – Affected Airplanes Listed by MSN**

<b>Affected Airplanes Listed by MSN</b>					
0179	0214	0296	0412	0558	0604
0607	0668	0704	0720	0726	0731
0754	0771	0799	0828	0841	0855
0909	0914	0925	0939	0986	1028
1030	1041	1070	1083	1093	1098
1108	1148	1294	1356	2713	2831

**Table 1 to Paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD – Affected  
MLG Sliding Tubes**

<b>Part Number</b>	<b>Serial Number</b>
201160302	78B
201160302	1016B11
201160302	1144B
201371302	B4493
201371302	B4513
201371302	SS4359
201371302	B4530
201371302	B4517
201371302	B4568
201371302	B4498
201371302	4490B
201371302	B202-4598
201371302	B165-4623
201371302	B244-4766
201371302	B267-4794
201371302	B272-4813
201160302	1108B



<b>Part Number</b>	<b>Serial Number</b>
201371304	B041-4871
201371304	B045-4869
201371304	B001-4781
201371304	B051-4892
201371304	B110-1952
201371304	B054-4891
201371304	B063-4921
201371304	B071-4911
201371304	B071-4917
201371304	B080-1933
201371304	B117-5010
201371304	B120-4989
201371304	B132-2023
201371304	B114-1956
201371304	B208-2009
201371304	B133-1947
201371304	B154-5037
201371304	B89 4952
201371304	B129-1964
201371304	B227-2010
201371304	B170-5031
201371304	B182-5047
201371304	B239-2053
201371304	B1401-2856
201371304	B1813-3142
201371304	B116-5004
201522353	B011-149
201522350	B014-25
201522350	B019-56

<b>Part Number</b>	<b>Serial Number</b>
201522350	B019-57
201522350	B021-69
201522350	B022-60
201522353	B03-111
201522353	B03-110
201522353	B112-317
201522353	B174-351
201522353	B179-392
201383350	4377B
201383350	4393B
201383350	B1831
201383350	B1832
201383350	SS4355B
201383350	SS4400B

**(j) Retained Inspections of AD 2017-01-11, with No Changes**

This paragraph restates the requirements of paragraph (i) of AD 2017-01-11, with no changes. For each MLG sliding tube identified as required by paragraph (h) of this AD, having a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD: Within 3 months after February 22, 2017 (the effective date of AD 2017-01-11) inspect affected MLG axles and brake flanges by doing a detailed visual inspection of the chromium plates for damage, and a Barkhausen noise inspection of the sliding tube axles for damage, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014. For Model A318 series airplanes, use the procedures specified for

Model A319 series airplanes in Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014.

**(k) Retained Corrective Action of AD 2017-01-11, with No Changes**

This paragraph restates the requirements of paragraph (j) of AD 2017-01-11, with no changes. If, during any inspection required by paragraph (j) of this AD, any damage is detected: Before further flight, replace the MLG sliding tube with a serviceable tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014. For Model A318 series airplanes, use the procedures specified for Model A319 series airplanes in Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014.

**(l) Retained Definition of Serviceable MLG Sliding Tube of AD 2017-01-11, with No Changes**

This paragraph restates the definition specified in paragraph (k) of AD 2017-01-11, with no changes. For the purpose of paragraph (k) of this AD, a serviceable sliding tube is defined as a sliding tube that meets the criterion in either paragraph (l)(1) or (l)(2) of this AD.

(1) A sliding tube having a part number and serial number not listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD.

(2) A sliding tube having a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD that has passed the inspections required by paragraph (j) of this AD.

**(m) Retained Parts Installation Prohibition of AD 2017-01-11, with No Changes**

This paragraph restates the requirements of paragraph (l) of AD 2017-01-11, with no changes.

(1) For airplanes that have an MLG sliding tube installed that has a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD: After an airplane is returned to service following accomplishment of the actions required by paragraphs (h), (i), and (j) of this AD, no person may install on any airplane an MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD, unless that sliding tube has passed the inspection required by paragraph (j) of this AD.

(2) For airplanes that, as of February 22, 2017 (the effective date of AD 2017-01-11), do not have an MLG sliding tube installed that has a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD: No person may install, on any airplane, an MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (i), (j), (l)(1), (l)(2), (m)(1), and (m)(2) of this AD unless that sliding tube has passed the inspection required by paragraph (j) of this AD.

**(n) New Definitions**

For the purpose of paragraphs (o), (p), (q), (r), and (s) of this AD the following definitions apply.

(1) Affected MLG shock absorber: An MLG shock absorber having a part number and serial number as identified in Safran Service Bulletin 200-32-286, Revision 3, dated

October 3, 2008, for Model A318, A319, and A320 series airplanes; and Safran Service Bulletin 201-32-43, Revision 3, dated October 3, 2008, for Model A321 series airplanes.

(2) Affected MLG sliding tube: An MLG sliding tube having a part number and serial number as identified in Appendix B of Safran Service Bulletin 200-32-321, Revision 2, dated October 3, 2017, for Model A318, A319, and A320 series airplanes; or Safran Service Bulletin 201-32-68, Revision 2, dated October 3, 2017, for Model A321 series airplanes, except those parts that passed an inspection as specified in Safran Service Bulletin 200-32-321; or Safran Service Bulletin 201-32-68, as applicable, and those parts that, after that inspection, have been repaired, using instructions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Serviceable MLG sliding tube: A MLG sliding tube that is not affected, or an affected MLG sliding tube, that has not exceeded 10,000 flight cycle since first installation on an airplane, or an affected MLG sliding tube that, within the last 5,000 flight cycles before installation on an airplane, passed an inspection specified in Airbus Service Bulletin A320-32-1441.

**(o) New Requirement of this AD: Repetitive Inspections**

At the compliance time specified in figure 2 to paragraph (o) of this AD, and thereafter at intervals not to exceed 5,000 flight cycles: Do a detailed inspection of each affected MLG sliding tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017.

**Figure 2 to Paragraph (o) of this AD – Initial Compliance Time for MLG Sliding Tube Inspection**

<b>Initial Compliance Time for MLG Sliding Tube Inspection (whichever occurs later, A or B)</b>	
<b>A</b>	Prior to exceeding 10,000 flight cycles since first installation of an affected MLG sliding tube on an airplane.
<b>B</b>	Within 5,000 flight cycles or 25 months, whichever occurs first after the effective date of this AD.

Note 2 to paragraph (o) of this AD: If no reliable data regarding the number of flight cycles accumulated by the MLG sliding tube are available, operators may refer to the guidance specified in Chapter 5.2, “Traceability”, of Section 1, of Part 1 of the Airbus A318/A319/A320/A321 Airworthiness Limitations Section.

**(p) New Requirement of this AD: Corrective Actions**

(1) If, during any inspection required by paragraph (o) of this AD, any crack is detected on an MLG sliding tube: Before further flight, replace that MLG sliding tube with a serviceable MLG sliding tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017.

(2) Replacement of an MLG on an airplane with an MLG having a serviceable MLG sliding tube installed is an acceptable method to comply with the requirements of paragraph (p)(1) of this AD for that airplane.

**(q) New Requirement of this AD: Part Replacement**

(1) Within 10 years after the effective date of this AD: Replace each affected MLG sliding tube with an MLG sliding tube that is not affected. Installation of an MLG

sliding tube that is not affected on an airplane constitutes terminating action for the repetitive inspections required by paragraph (o) of this AD for that airplane.

(2) Replacement of an MLG on an airplane with an MLG that does not have an affected MLG sliding tube installed is an acceptable method to comply with the requirement of paragraph (q)(1) of this AD for that airplane.

**(r) New Requirement of this AD: Parts Installation Limitation**

(1) As of the effective date of this AD no person may install on any airplane an affected MLG shock absorber.

(2) Do not install an affected MLG sliding tube on any airplane as specified in paragraph (r)(2)(i) or (r)(2)(ii) of this AD, as applicable.

(i) For an airplane with an affected MLG sliding tube installed as of the effective date of this AD: After replacement of each affected MLG sliding tube as required by paragraph (q) of this AD.

(ii) For an airplane that does not have an affected MLG sliding tube installed as of the effective date of this AD: As of the effective date of this AD.

**(s) Identification of Airplanes Not Affected by Certain Requirements of this AD**

An airplane on which Airbus Modification 161202 or Modification 161346 has been installed in production is not affected by the requirements of paragraphs (g), (h), (j), (o), and (q), of this AD, provided it has been verified that no affected MLG sliding tube is installed on that airplane.

**(t) Credit for Previous Actions**

(1) This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before June 29, 2007, using Airbus AOT A320-32A1273, Revision 01, dated May 6, 2004.

(2) This paragraph provides credit for the initial inspection and applicable corrective actions required by paragraphs (o) and (p) of this AD if those actions were performed before the effective date of this AD, using the Accomplishment Instructions in Airbus Service Bulletin A320-32-1441, dated December 28, 2016.

**(u) Service Information Exceptions**

The service information specified in paragraph (g) of this AD has instructions to send any cracked part to Messier-Dowty. This AD does not include such a requirement, in accordance with the procedures specified in paragraph (w)(2) of this AD.

**(v) No Reporting Requirement**

Although Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017, specifies to submit certain information to the manufacturer, and specifies that action as “RC,” (required for compliance) this AD does not include that requirement.

**(w) Other FAA AD Provisions**

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards



District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (x)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(ii) AMOCs approved previously for AD 2007-11-11 are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD.

(iii) AMOCs approved previously for AD 2017-01-11 are approved as AMOCs for the corresponding provisions of paragraphs (h), (i), (j), (k), (l), and (m) of this AD.

(2) *Contacting the Manufacturer:* As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraphs (u) and (v) of this AD: If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane

can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

**(x) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0135, dated June 26, 2018, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0017.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3223.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – ELAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

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Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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